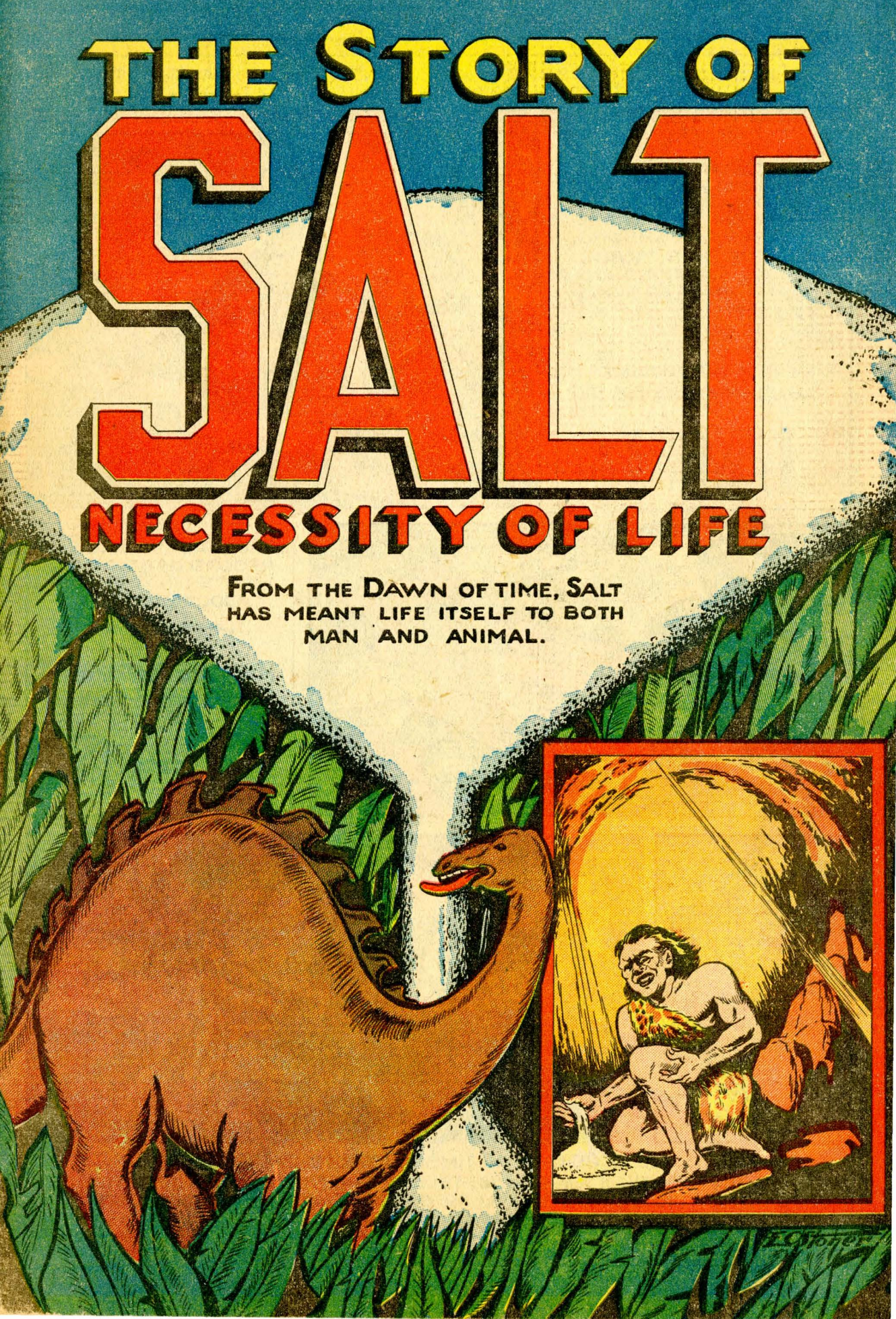
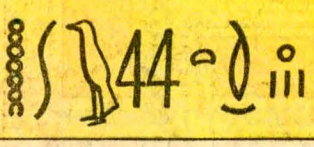
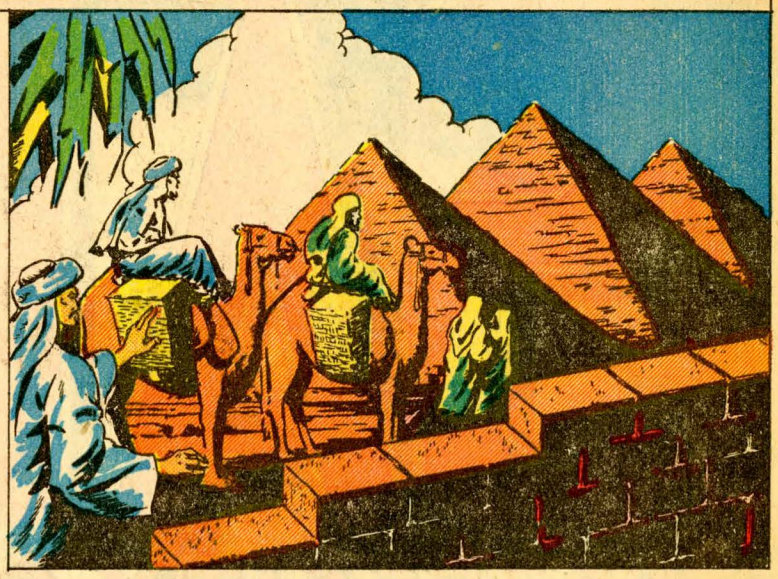

THE STORY OF
SALT
NECESSITY OF LIFE
FROM THE DAWN OF TIME, SALT HAS MEANT LIFE ITSELF TO BOTH MAN AND ANIMAL.

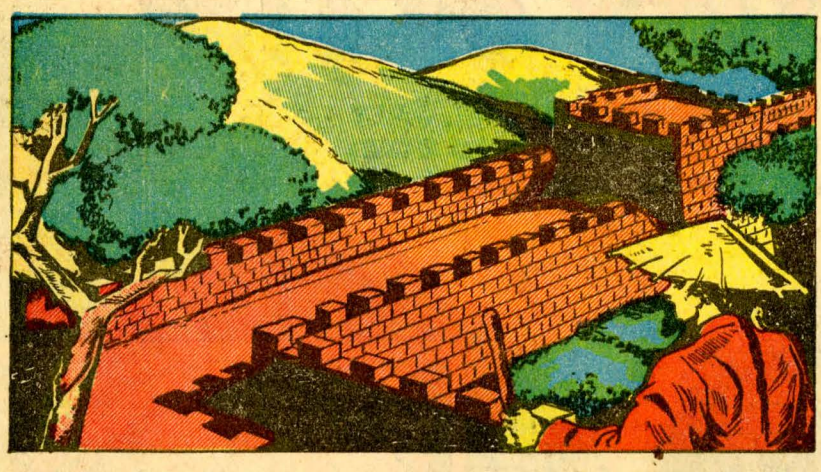
SALT IS AS OLD AS THE WORLD. LIKE WATER AND FOOD, IT IS A NECESSITY WITHOUT WHICH NEITHER MAN NOR ANIMAL COULD SURVIVE.

THE EGYPTIANS, WHOSE CIVILIZATION DATES BACK 6000 YEARS, ENJOYED A PROFITABLE SALT TRADE WITH THEIR NEIGHBORS. MANY OF THEIR TRADE ROUTES, STARTED THOUSANDS OF YEARS AGO, ARE STILL IN USE.

HERE IS THE ANCIENT EGYPTIAN SYMBOL FOR SALT:







THE EARLIEST KNOWN RECORD OF SALT WAS WRITTEN IN CHINESE ABOUT 2700 B.C.

HERE ARE THE CHINESE CHARACTERS FOR SALT:

SALT IS MENTIONED MORE THAN 30 TIMES IN THE HOLY BIBLE. THE FIRST REFERENCE IS IN THE BOOK OF JOB, TELLING THE FAMILIAR STORY OF LOT'S WIFE BEING TURNED INTO "A PILLAR OF SALT" AS SHE LOOKED BACK AT BURNING GOMORRAH.

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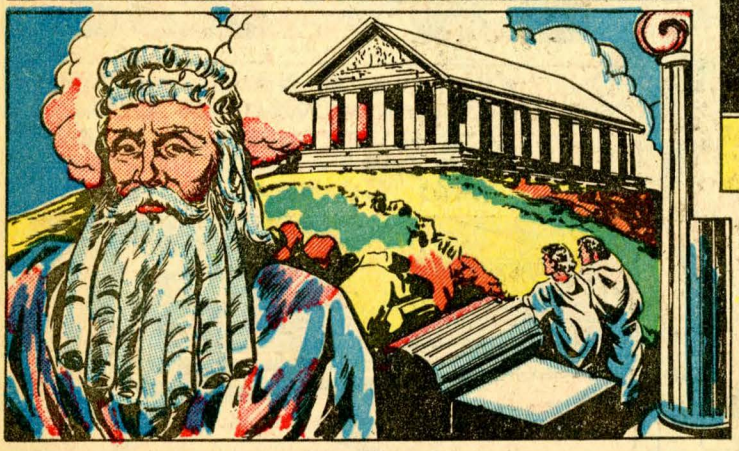
THE PHOENICIANS NOT ONLY VALUED SALT HIGHLY AS A FOOD SEASONING, BUT IT BECAME FOR THEM A SYMBOL OF TRUST AND FRIENDSHIP ··· CONTRACTS WERE "BOUND WITH SALT". MANY OF THE FAMILIAR SAYINGS ABOUT SALT ORIGINATED IN THIS EARLY PERIOD OF MAN'S HISTORY.

THE FAMOUS POET AND PHILOSOPHER, HOMER, WHO LIVED IN GREECE 950 B.C. CALLED SALT "DIVINE". HIS COUNTRYMEN USED SALT IN SACRIFICES TO THEIR GODS.



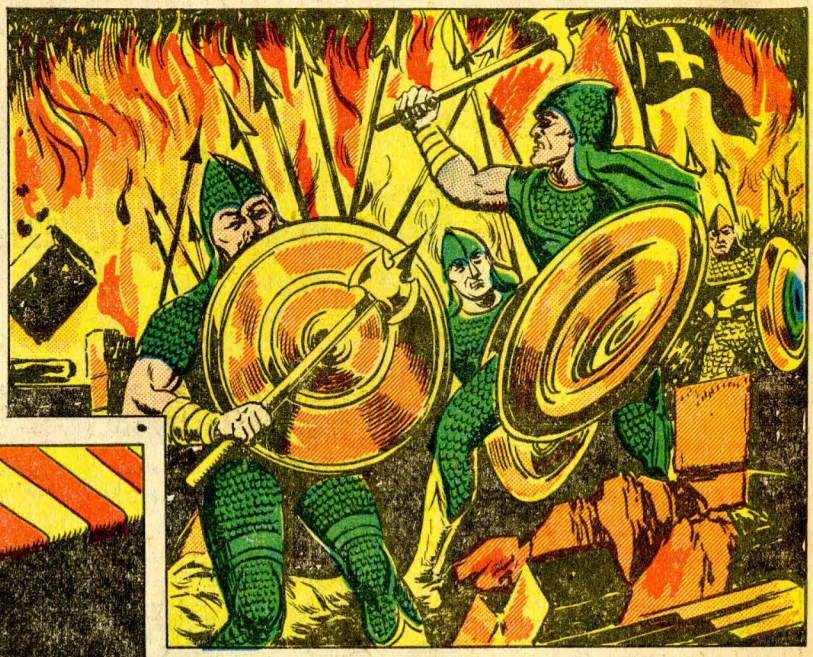
PLATO·· 428 B.C. DESCRIBED SALT AS *"DEAR TO THE GODS"*

753 B.C. IN THE RISE OF ROME, SALT PLAYED AN IMPORTANT PART, BOTH IN TRADE AND AS A MEDIUM OF EXCHANGE.

IT WAS THE CUSTOM FOR ROME TO PAY HER WARRIORS PARTLY WITH SALT, MADE IN THE FORM OF COINS AND CALLED *"SALARIUM"*, THE LATIN WORD FROM WHICH OUR ENGLISH WORD *"SALARY"* COMES.

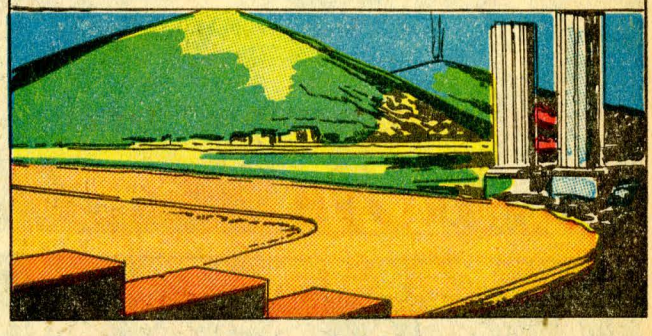
ALTHOUGH USED THROUGHOUT THE ENTIRE ANCIENT WORLD, PRODUCTION OF SALT WAS A SLOW PROCESS.----THE GROWING NEED FOR IT WAS OFTEN A CAUSE FOR BLOODSHED AND WAR.

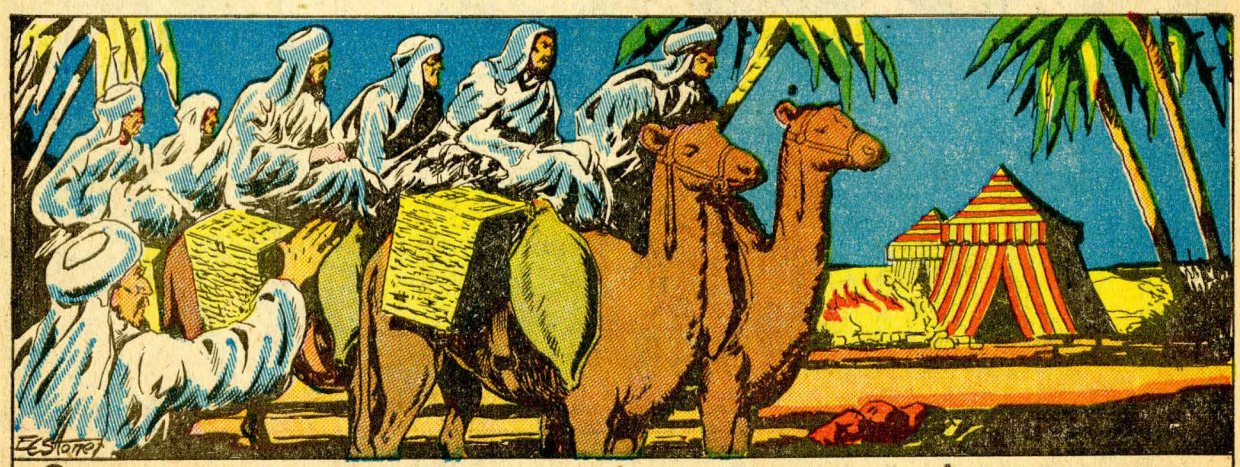
IN THE YEAR 147 B.C., THE ROMANS, EVER SEEKING NEW CONQUESTS, LOOTED THE CITY OF CARTHAGE. THE SURVIVING INHABITANTS WERE SOLD INTO SLAVERY AND THE SITE OF THE DESTROYED CITY WAS PLOWED UP AND "SOWN WITH SALT".



50 B.C.---SALT TRADE THRIVED IN ASIA MINOR AMONG THE MANY TRIBES OF ARABIA.

ONE OF THE OLDEST ROADS IN ITALY, THE "VIA SALARIA", WAS AN OLD SALT TRADE ROUTE USED BY THE ROMANS TO CARRY SALT NORTHWARD INTO CENTRAL EUROPE.





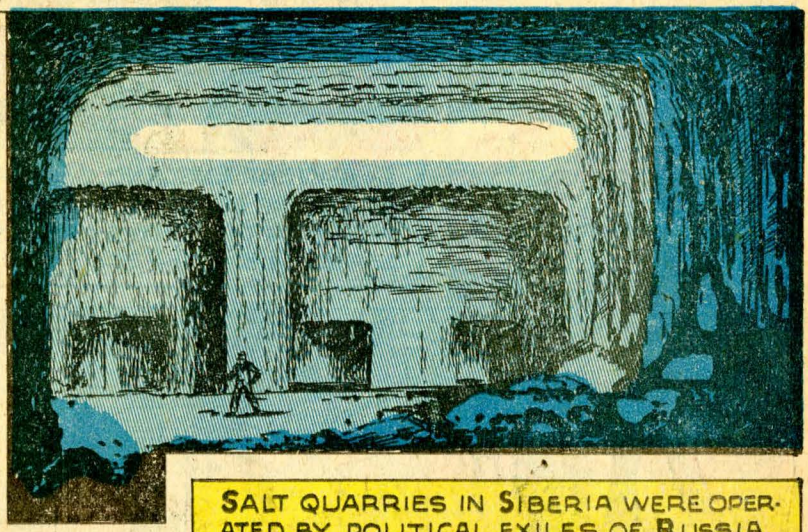
SALT WAS CONSIDERED A SIGN OF GOOD FORTUNE BY THE ARABS, AND WAS OFTEN BURNED FOR "LUCK" BEFORE A CARAVAN STARTED ON ITS JOURNEY.

A.D. 1--- FOR NEARLY 1000 YEARS AFTER THE BEGINNING OF THE CHRISTIAN ERA, SALT WAS PRODUCED IN NEARLY THE SAME MANNER THAT HAD BEEN IN USE FOR 3000 YEARS. SALT, INSTEAD OF BEING WHITE AND REFINED, WAS COARSE AND BROWN IN COLOR.

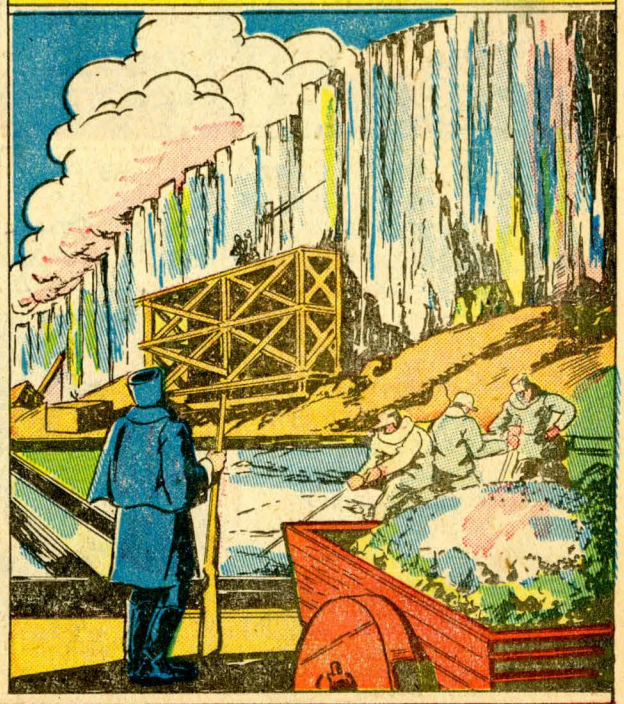
1000 A.D. MOST OF THE SALT UP TO THIS TIME CAME FROM THE SHORES OF THE SEAS. BUT AS THE INLAND COUNTRY OF CENTRAL AND EASTERN EUROPE BECAME POPULATED, NEW SOURCES FOR SALT WERE SOUGHT, AND---

1000 A.D.

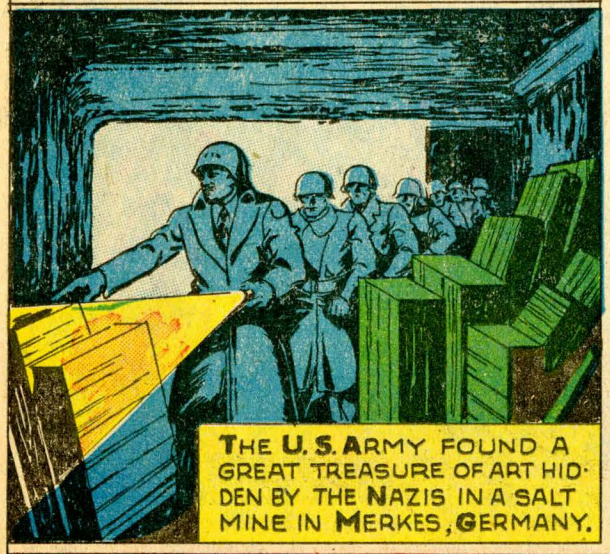
THE DISCOVERY OF ROCK-SALT DEPOSITS IN WIELICZKA, POLAND INTRODUCED ROCK-SALT MINING. THIS HUGE MINE THUS HAS BEEN IN OPERATION FOR 1000 YEARS. IT WAS LOST TO THE AUSTRIANS IN 1772. POLAND REGAINED IT AFTER WORLD WAR I.



SALT QUARRIES IN SIBERIA WERE OPERATED BY POLITICAL EXILES OF RUSSIA IN THE 11TH CENTURY.

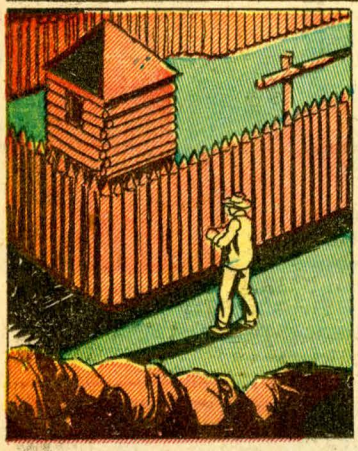


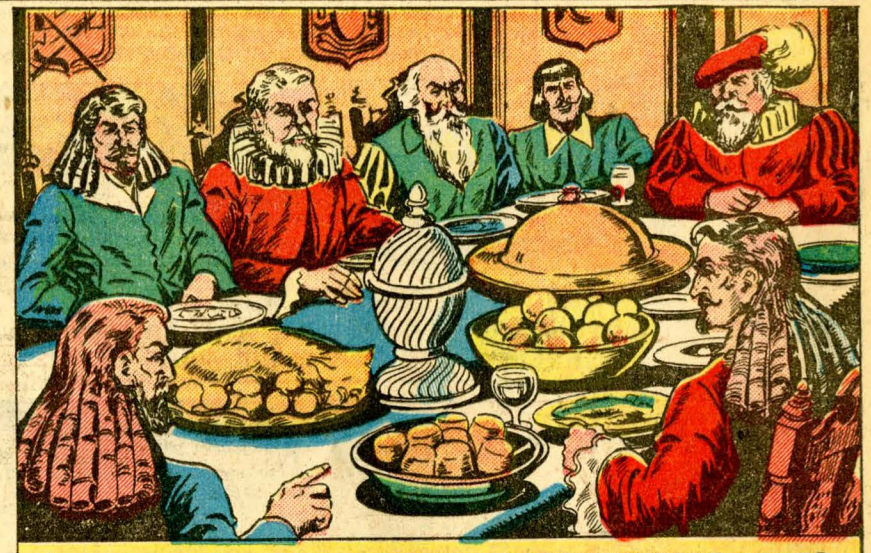
THE EARLY TEUTONS DEVELOPED SALT MINES IN WHAT IS NOW GERMANY. DURING WORLD WAR II, THE GERMANS STORED THEIR GREAT WORKS OF ART FOR SAFETY IN ONE OF THESE MINES.



THE U.S. ARMY FOUND A GREAT TREASURE OF ART HIDDEN BY THE NAZIS IN A SALT MINE IN MERKES, GERMANY.

LONG BEFORE KING JOHN'S MAGNA CHARTA, 1215 A.D., THE ROMANS HAD EXTENDED THEIR SALT ROUTES INTO THE LAND OF THE BRITONS. EARLIEST LONDON WAS AN IMPORTANT TRADING CENTER FOR SALT.



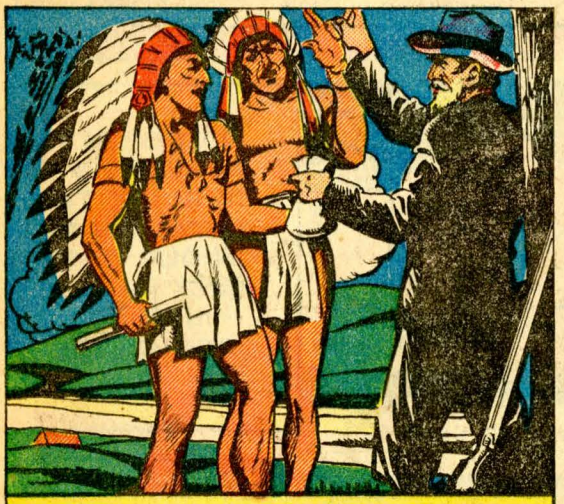


IN ANCIENT ENGLAND, SALT OFTEN DETERMINED THE ORDER OF SEATING AT MEALS. A LARGE VESSEL FILLED WITH SALT WAS PLACED IN THE CENTER OF THE TABLE ... THE NOBILITY WERE SEATED "ABOVE THE SALT;" OTHERS SAT "BELOW THE SALT."

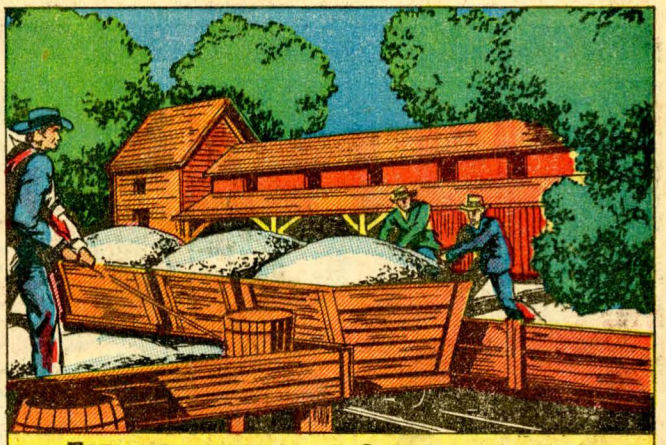
1429-- FRANCE ENACTED LAWS PROHIBITING THE MAKING OF SALT. HEAVY TAXES MADE IT AVAILABLE ONLY TO THE RICH, BECAUSE OF THE SHORT SUPPLY.

1788--
HARSH SALT LAWS DID MUCH TO BRING ABOUT THE FRENCH REVOLUTION.

1776--AS THE THIRTEEN COLONIES IN AMERICA GREW TO NATIONHOOD, OUR FOREFATHERS SOUGHT NEW SOURCES FOR SALT. IN NEW YORK STATE, A LARGE DEPOSIT WAS FOUND ON THE SITE NOW KNOWN AS SYRACUSE. FOR 100 YEARS, THESE SALT BEDS SUPPLIED MUCH OF AMERICA'S SALT.

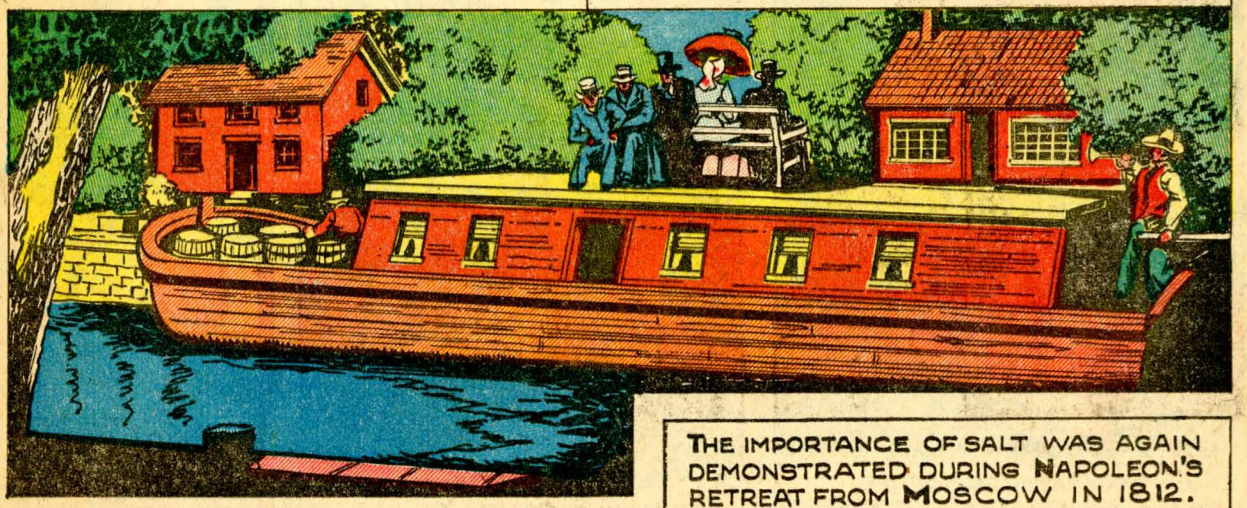


THE AMERICAN INDIAN VALUED SALT HIGHLY AND OFTEN TRADED HIS LAND FOR THE "MAGIC WHITE SAND".



EARLY SALT BEDS AT SYRACUSE, N.Y.

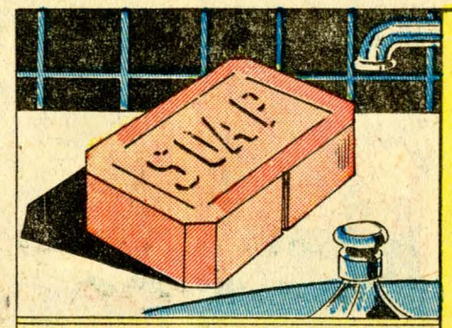
BY THE EARLY 1800'S, CANALS WERE AN IMPORTANT MEANS OF TRANSPORTATION. SALT WAS A FACTOR IN BUILDING THE ERIE CANAL, WHICH MADE SHIPPING TO THE ATLANTIC SEABOARD LESS COSTLY.



THE IMPORTANCE OF SALT WAS AGAIN DEMONSTRATED DURING NAPOLEON'S RETREAT FROM MOSCOW IN 1812. THOUSANDS OF HIS SOLDIERS DIED FROM WOUNDS THAT WOULD NOT HEAL FOR LACK OF SALT.

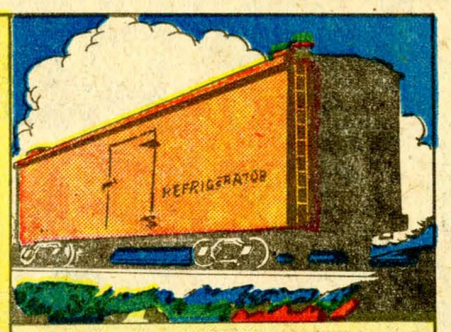
NECESSITY OF LIFE — SALT — VITAL IN INDUSTRY

SALT IS USED IN STEEL PLANTS --- BY REFINERS OF OIL, GOLD AND SILVER



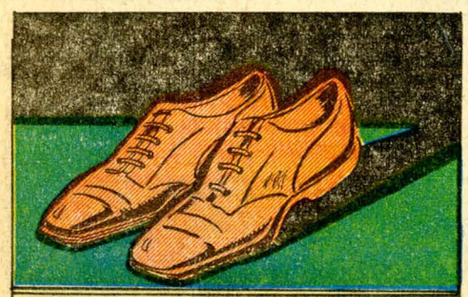
IN MAKING SOAP

MOST OF US THINK OF SALT ONLY AS A FLAVOR IN OUR FOOD. FEW OF US REALIZE THE NUMEROUS IMPORTANT WAYS IN WHICH SALT PLAYS A PART IN OUR DAILY LIVES. IT IS SAID THAT SALT HAS NO LESS THAN 1400 USES. --IN THE HOME, IN INDUSTRY, IN AGRICULTURE, CHEMISTRY AND MEDICINE.

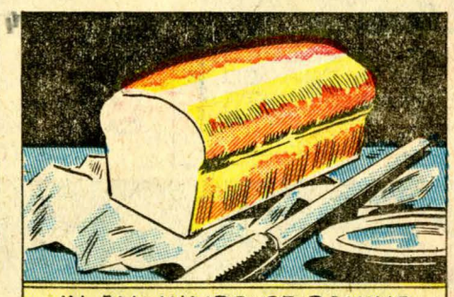


MIXED WITH ICE TO KEEP LOW TEMPERATURES.

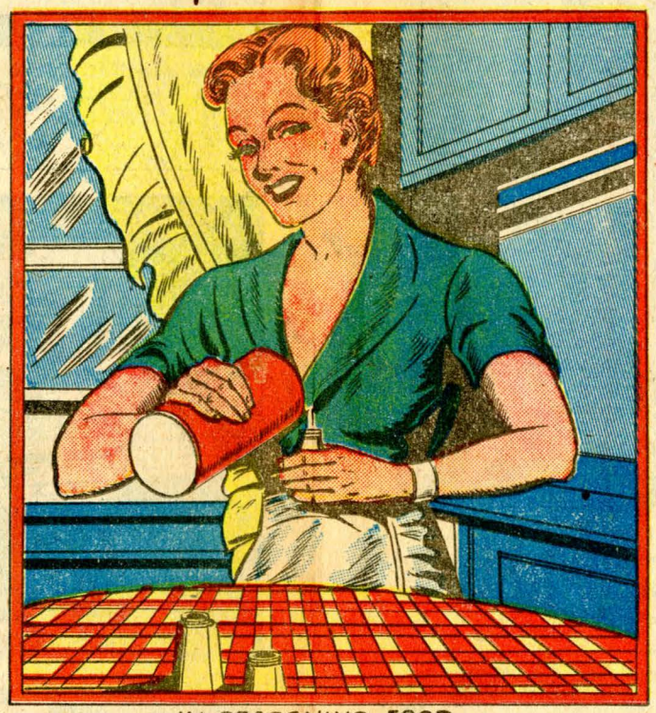
TO MAKE SYNTHETIC RUBBER.



IN TANNING LEATHER.

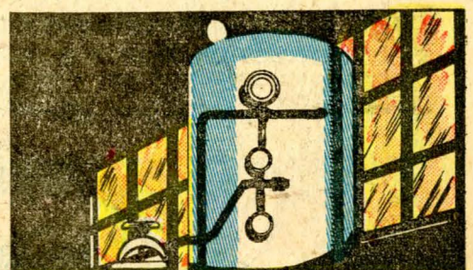


IN ALL KINDS OF BAKING.



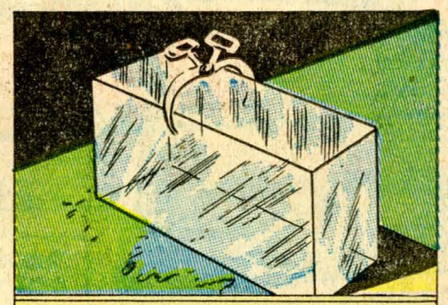
IN SEASONING FOOD.

IN FISH PACKING.



NECESSARY IN OPERATION OF WATER SOFTENERS

IN MAKING BLEACHES.

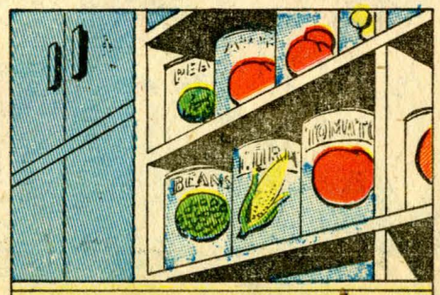


FOR MANUFACTURE OF ICE.

IN GLAZING POTTERY.

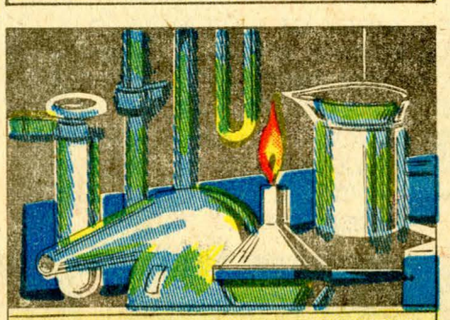
IN PRESERVATION OF MEATS

IN THE MANUFACTURE OF BLEACH FOR PAPER.

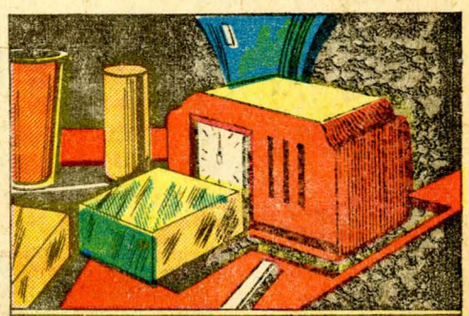


IN PROCESSING FOODS.

SCIENCE AND INDUSTRY HAVE MADE SALT AVAILABLE IN GREATER QUANTITY AND BETTER QUALITY THAN MAN HAS EVER KNOWN BEFORE. THE EVER-GROWING LIST OF USES FOR IT ONLY SERVES TO HIGHLIGHT THE GREAT IMPORTANCE OF SALT AS A BASIC COMMODITY. DESPITE THE MILLIONS OF TONS USED ANNUALLY IN THIS COUNTRY, THE SUPPLY OF SALT IS PRACTICALLY WITHOUT LIMIT.



IN HUNDREDS OF CHEMICAL PROCESSES.



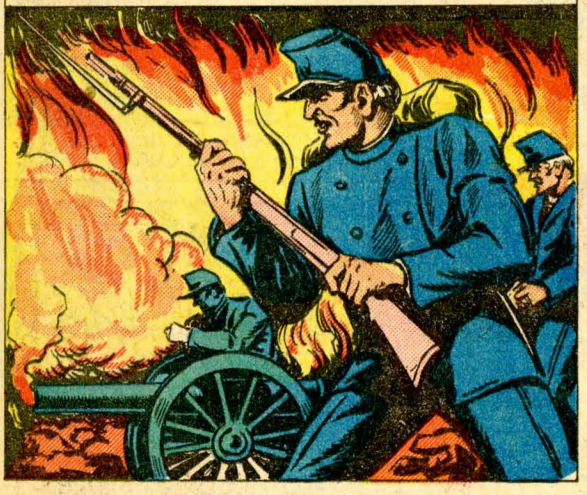
IN MAKING PLASTICS.

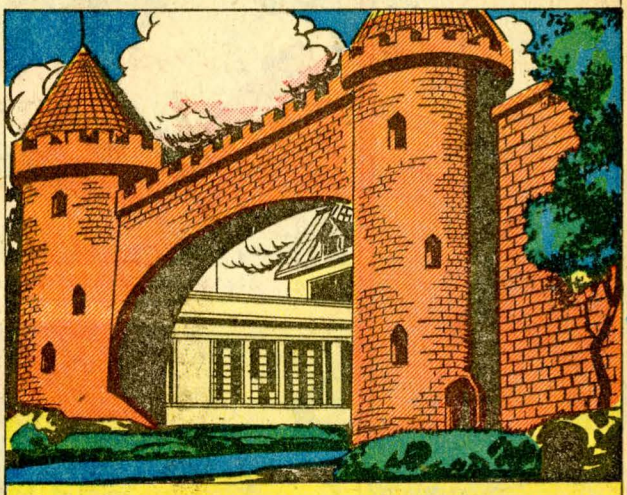
INDIA 1856

AS IN FRANCE IN 1429, HERE 427 YEARS LATER, A HEAVY TAX WAS PUT ON SALT. MASS PROTESTS AGAINST THIS PRACTICE RESULTED IN THE SEPOY REBELLION, OTHERWISE KNOWN AS THE "SALT REBELLION"-- PROVING "HISTORY REPEATS ITSELF"

1861 – 1865

IN OUR WAR BETWEEN THE STATES, THE DESTRUCTION OF SALT SUPPLIES OF OPPOSING ARMIES WAS CONSIDERED IMPORTANT TO VICTORY.



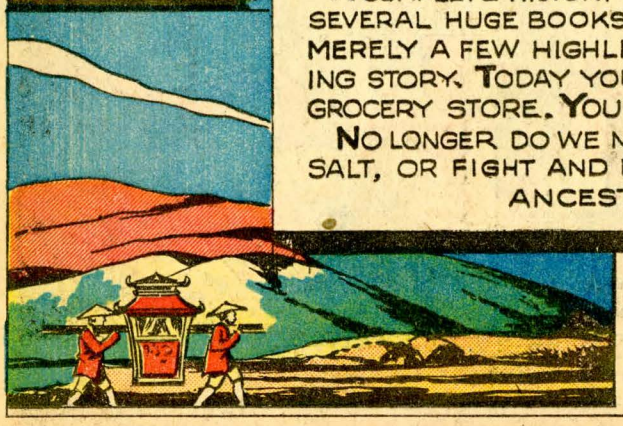


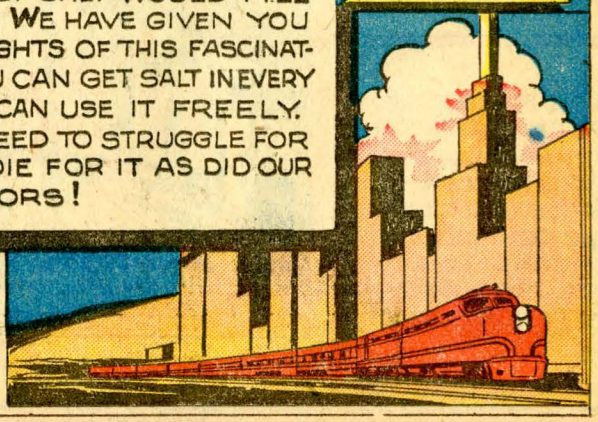
SALT HAS OFTEN DETERMINED THE LOCATIONS OF TOWNS, CITIES AND THE MOVEMENT OF POPULATIONS THROUGHOUT THE WORLD.

2700 B.C.

A COMPLETE HISTORY OF SALT WOULD FILL SEVERAL HUGE BOOKS. WE HAVE GIVEN YOU MERELY A FEW HIGHLIGHTS OF THIS FASCINATING STORY. TODAY YOU CAN GET SALT IN EVERY GROCERY STORE. YOU CAN USE IT FREELY. NO LONGER DO WE NEED TO STRUGGLE FOR SALT, OR FIGHT AND DIE FOR IT AS DID OUR ANCESTORS!

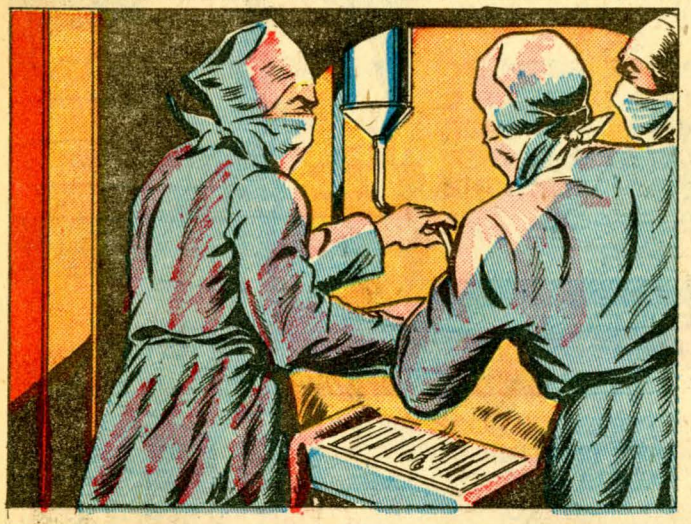
1948 A.D.

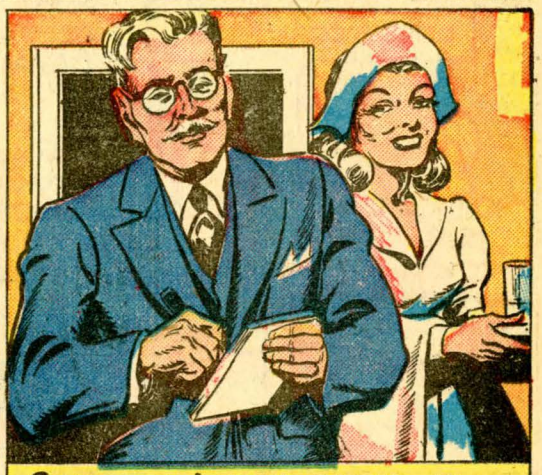




THE HEALTH-GIVING PROPERTIES OF SALT HAVE LONG BEEN RECOGNIZED BY THE MEDICAL PROFESSION.--- SALT IS USED IN GENERAL PRACTICE, AND SURGERY. IN PHARMACY, SODIUM CHLORIDE, (CHEMICAL NAME FOR SALT) IS USED IN MAKING MANY DIFFERENT KINDS OF MEDICINES.

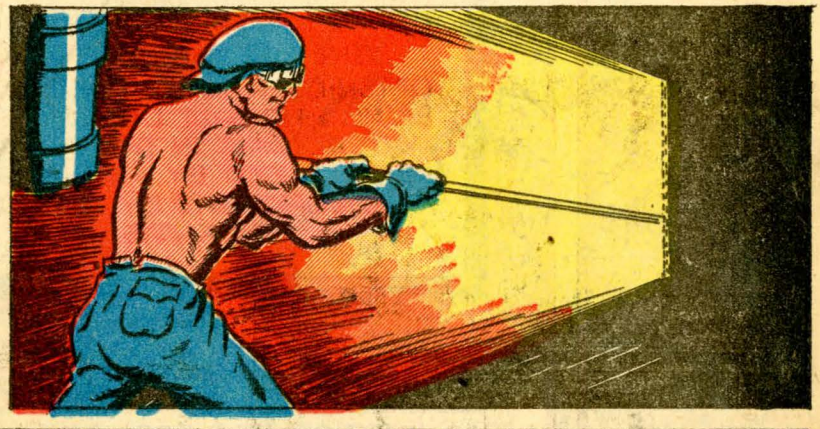
SALT AS A SALINE SOLUTION HAS MANY IMPORTANT USES IN MEDICAL SURGERY.



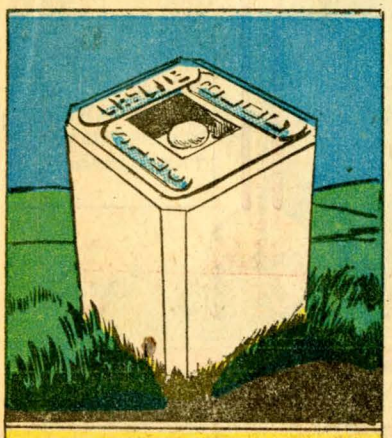


SALT WITH IODINE ADDED IS SOMETIMES PRESCRIBED IN THE TREATMENT OR PREVENTION OF SIMPLE GOITRE.

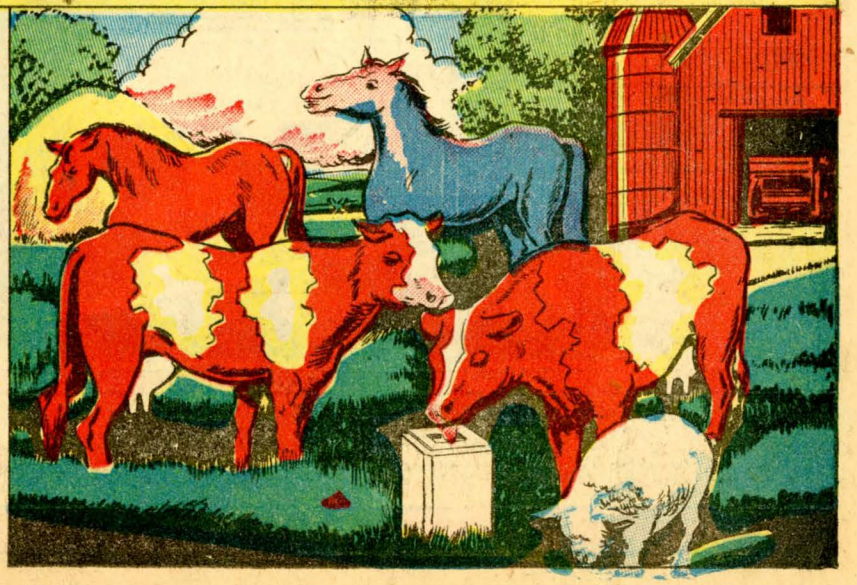
WORKERS EXPOSED TO EXTREME HEAT SUCH AS MAY BE FOUND IN A STEEL MILL, REQUIRE A DAILY RATION OF SALT IN ORDER TO REPLACE NATURAL BODY SALT LOST WHILE WORKING UNDER HIGH TEMPERATURES.



SALT HAS MANY USES ON THE FARM.-- LIVESTOCK, IN ORDER TO BE HEALTHY, REQUIRE A CERTAIN AMOUNT OF SALT, AND EITHER SALT-TREATED HAY, OR A SALT BLOCK IS PROVIDED FOR FEEDING CATTLE.



THE SALT BLOCK IS PLACED WITHIN EASY REACH OF GRAZING CATTLE.



SALT-- WHERE DOES IT COME FROM? HOW IS IT OBTAINED?

A SALT MINE WORKS VERY MUCH LIKE A COAL MINE.

MOST SALT COMES FROM DEEP IN THE EARTH. IT IS OBTAINED EITHER BY (A) MINING (ROCK SALT) OR (B) IN BRINE FORM, BY SINKING A DEEP WELL THROUGH WHICH SALT AND WATER TOGETHER CAN BE PUMPED TO THE SURFACE.

WATER IS PUMPED DOWN INTO SALT DEPOSIT TO FORM BRINE.

SURFACE

DIRT-- OR TOP SOIL

ASH

LIME STONE

SHALE

LAYERS OF ROCK

A

B

SHALE

ROCK

ROCK

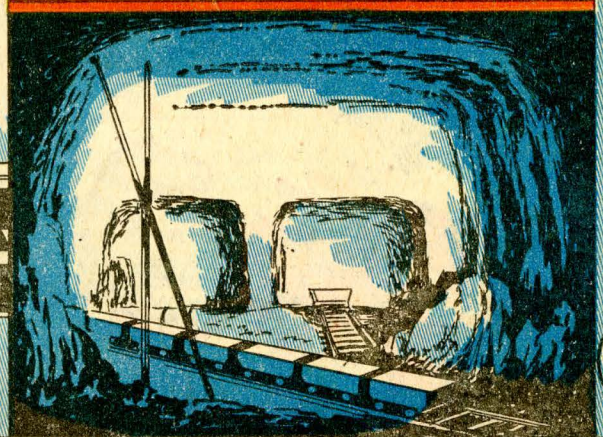
ROCK SALT DEPOSIT

SALT DEPOSIT

← IN MOST TYPES OF ROCK SALT MINING, A SHAFT IS SUNK INTO THE EARTH. THE SALT IS BLASTED LOOSE, HOISTED TO THE SURFACE AND CRUSHED TO VARIOUS SIZES.

THE BRINE WELL, ----- → OFTEN OVER 1000 FEET DEEP, BRINGS UP SALT DISSOLVED IN WATER. SALT IN THIS FORM IS READILY USED BY REFINERS OF TABLE SALT AND BY CHEMICAL PLANTS.

INTERIOR OF A ROCK SALT MINE.

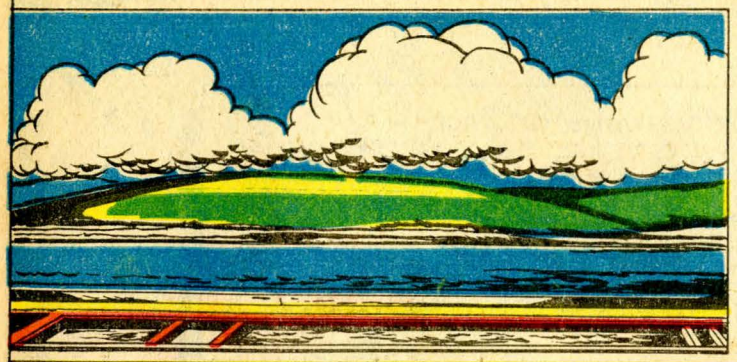


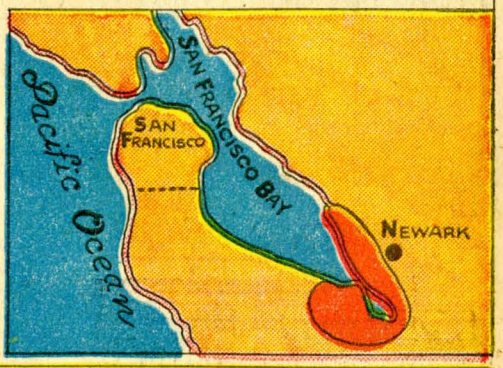
WATER MIXED WITH SALT MAKES BRINE WHICH IS PUMPED TO THE SURFACE.

BRINE

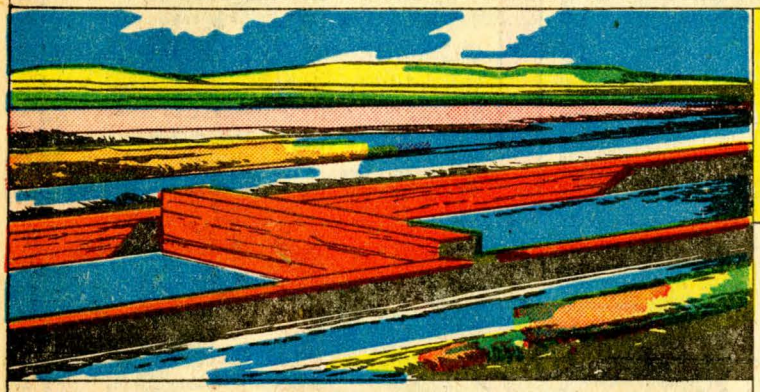
SALT MINES AND BRINE WELLS ARE THE MOST COMMON SOURCES OF SALT. BUT THERE IS A THIRD SOURCE, EVEN MORE INTERESTING AS YOU SHALL SEE, WHICH SUPPLIES THE PACIFIC COAST WITH ABUNDANT SALT RIGHT FROM THE WATERS OF THE OCEAN.

THE PRODUCTION OF SALT BY SOLAR EVAPORATION. THIS IS THE METHOD THE ANCIENTS KNEW---A METHOD PRACTICED FOR FOUR THOUSAND YEARS.



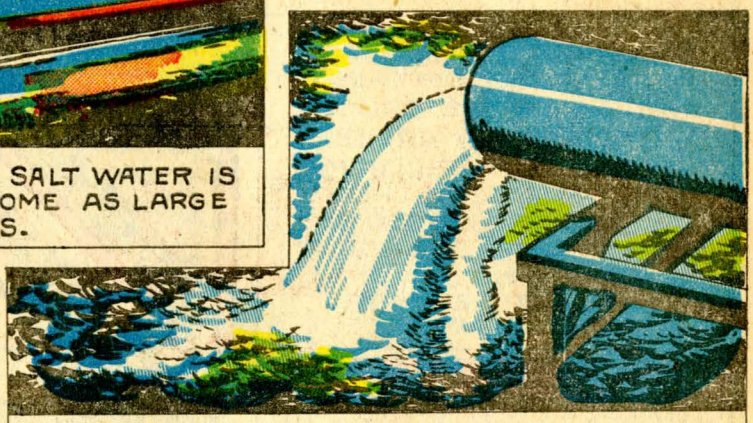


TODAY AT NEWARK, CALIFORNIA, ON SAN FRANCISCO BAY, THESE AGE OLD METHODS HAVE BEEN BROUGHT UP TO DATE TO MEET THE NEEDS OF THE MODERN WORLD. HERE, BILLIONS OF GALLONS OF SALT WATER ARE PUMPED INTO GIANT PONDS COVERING SOME 40 SQUARE MILES TO TURN OUT MOUNTAINS OF SALT EVERY YEAR.



THROUGH A SYSTEM OF DIKES, SALT WATER IS COLLECTED IN HUGE PONDS, SOME AS LARGE AS 800 ACRES.

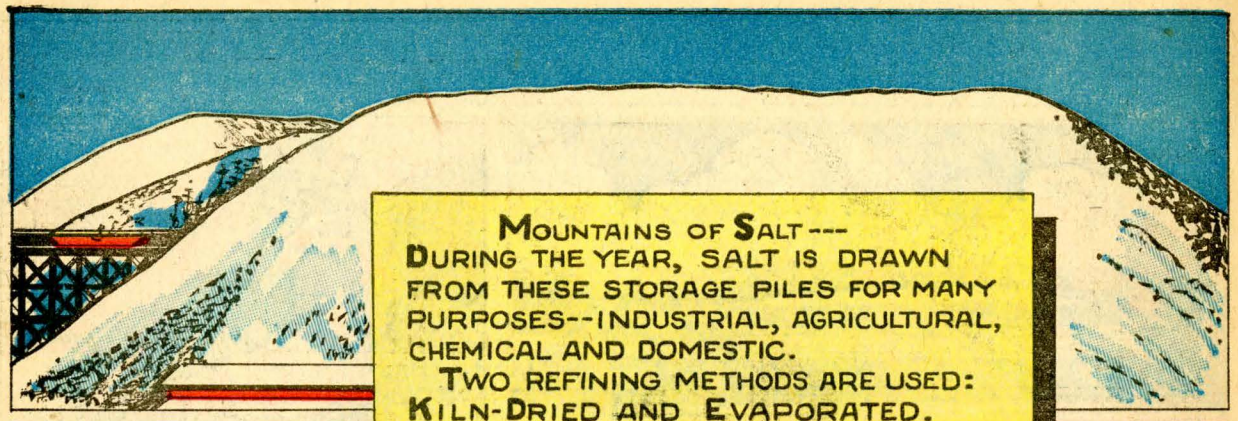
WIND AND SUN TAKE OVER AND EVAPORATION BEGINS. THROUGH THE HOT, DRY SUMMER MONTHS THE SALT CONTENT OF THE REMAINING BRINE GROWS FROM 3% TO 25%.



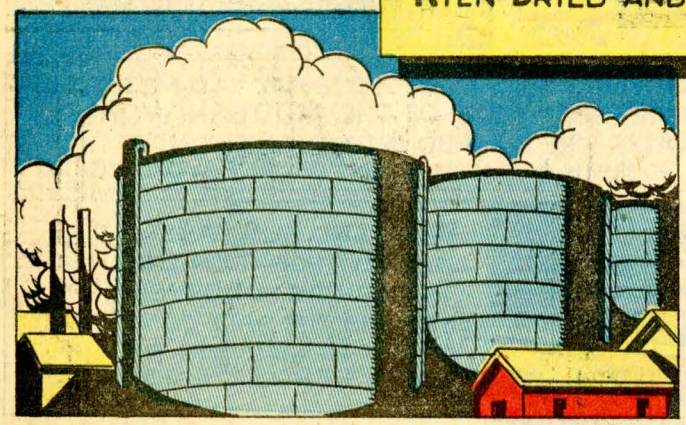
BRINE SATURATED WITH SALT IS PUMPED INTO SMALLER PONDS. WITH CONTINUING EVAPORATION, SALT CRYSTALS FORM ON THE POND BOTTOM AND GROW UNTIL A SINGLE SALT CRYSTAL MAY REACH THE SIZE OF A LUMP OF SUGAR.

FROM MARCH TO SEPTEMBER, MORE BRINE IS ADDED UNTIL FOUR OR MORE INCHES OF SALT HAVE CRYSTALLIZED. THE COVERING WATER IS THEN DRAINED OFF AND THE SALT HARVESTING SEASON IS AT HAND.

HUGE HARVESTING MACHINES, EACH WITH A CAPACITY OF 125 TONS PER HOUR, GATHER OVER 700,000 TONS DURING THE TWELVE WEEK HARVESTING SEASON STARTING IN SEPTEMBER. THIS SALT, AFTER NUMEROUS WASHINGS AND NOW 99% PURE, IS CARRIED TO HUGE STOCK PILES TO AWAIT FURTHER PROCESSING.



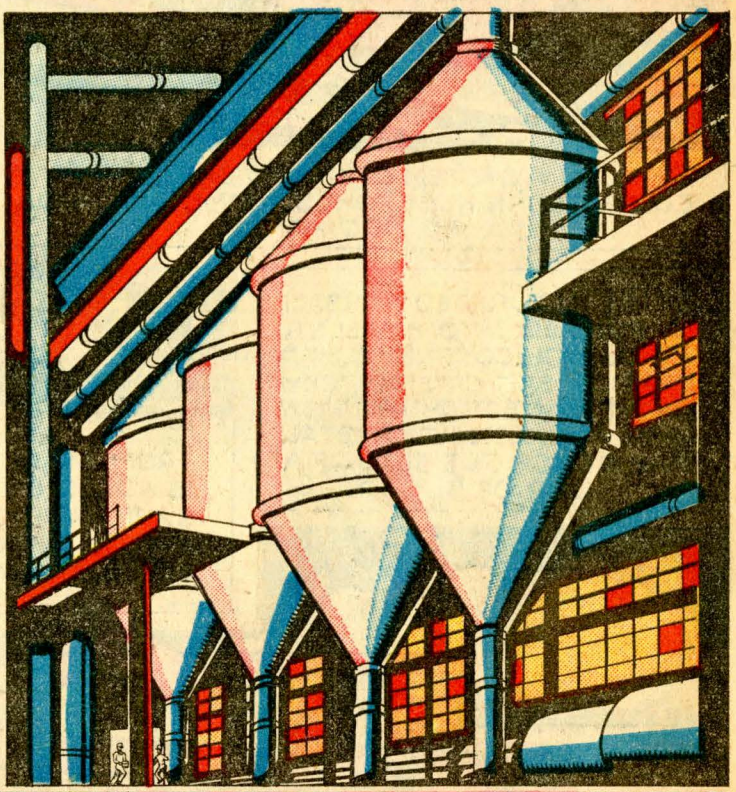
MOUNTAINS OF SALT---
DURING THE YEAR, SALT IS DRAWN FROM THESE STORAGE PILES FOR MANY PURPOSES--INDUSTRIAL, AGRICULTURAL, CHEMICAL AND DOMESTIC.
TWO REFINING METHODS ARE USED: KILN-DRIED AND EVAPORATED.



THE KILN-DRIED PROCESS IS USED FOR SCORES OF INDUSTRIAL AND AGRICULTURAL USES REQUIRING COARSE SALT. AFTER MUCH WASHING, THE SALT IS DRIED, SCREENED AND PACKED FOR ITS MANY MARKETS.

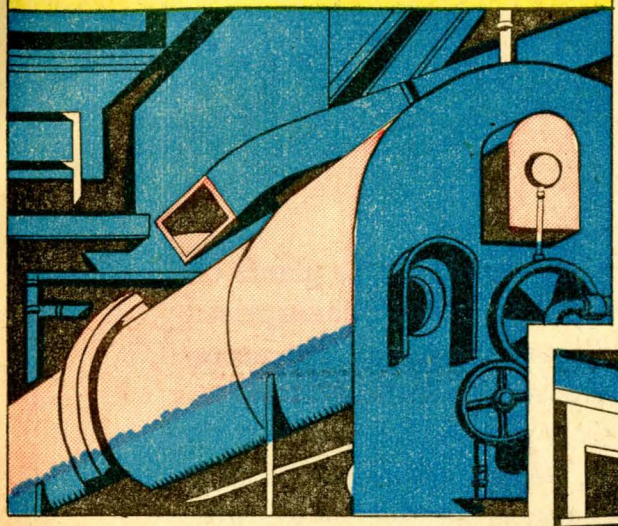
TABLE SALT IS PRODUCED IN AN ENTIRELY DIFFERENT WAY. AFTER THE CRUDE SALT CRYSTALS ARE DISSOLVED, THEY ARE CHEMICALLY TREATED IN HUGE TANKS HOLDING 100,000 GALLONS OF WATER. THE RESULTING BRINE IS NOW SIPHONED OFF AND FILTERED FOR SPECIAL VACUUM PROCESS.

THE PURIFIED BRINE IS PIPED IN TO HUGE VACUUM EVAPORATORS, EACH OVER TWO STORIES HIGH. HERE, CAREFULLY CONTROLLED, THE BRINE IS BOILED IN A VACUUM TO PRODUCE A CONTINUOUS FLOW OF FINE SALT CRYSTALS AT THE RATE OF 400,000 LBS. PER DAY.

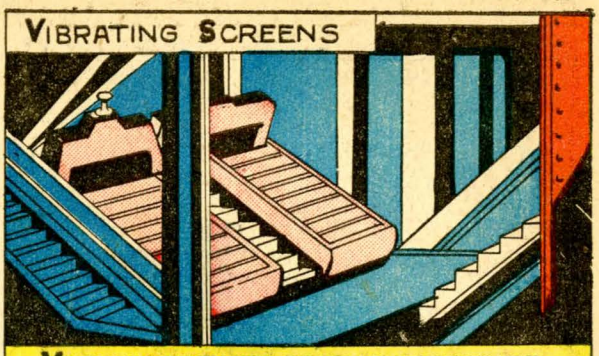


SALT HAS MANY IMPORTANT USES IN ALL KINDS OF INDUSTRIES.--ONLY A RELATIVELY SMALL QUANTITY GOES INTO THE HOME:-PERHAPS 5%. AN INTERESTING FACT IS THAT THE AVERAGE PERSON ADDS ABOUT FIVE POUNDS OF SALT TO HIS FOOD EACH YEAR AS SEASONING.

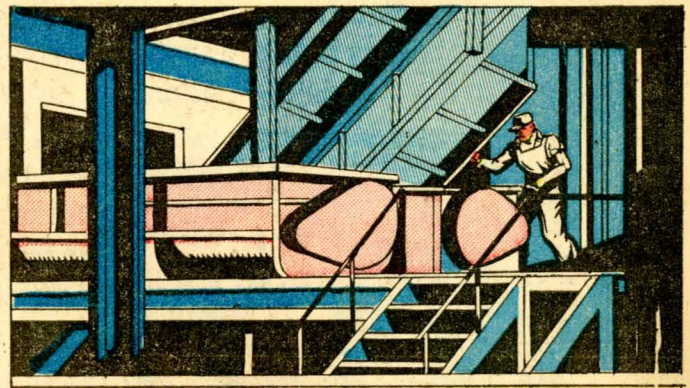
VACUUM SALT, STILL DAMP AFTER LEAVING EVAPORATORS, IS DRIED IN A REVOLVING FURNACE.



VIBRATING SCREENS

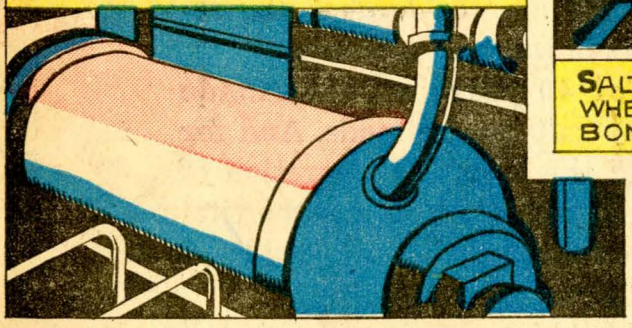


VACUUM REFINED SALT IS SCREENED TO PRODUCE FOUR SIZES, EACH SMALLER THAN THE HEAD OF A PIN.



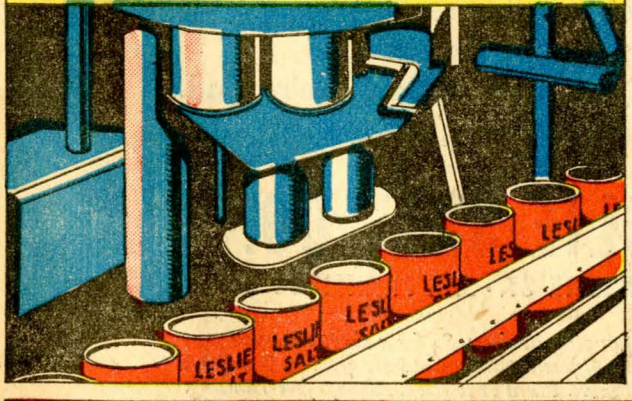
SALT READY TO BE TREATED GOES TO MIXERS WHERE EITHER IODINE OR MAGNESIUM CARBONATE (OR BOTH) MAY BE ADDED.

SALT FOR CANNING, PICKLING, CURING AND OTHER INDUSTRIAL USES IS KILN-DRIED IN REVOLVING DRYERS.



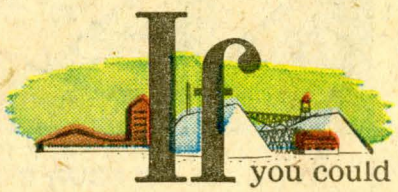
ASSEMBLY ROOM WHERE POURING SPOUTS ARE ATTACHED.

CARDBOARD ROLLS ARE CUT TO MAKE CONTAINERS TO BE FILLED BY ACCURATE WEIGHING MACHINES.



MACHINERY HAS BEEN DEVELOPED FOR EVERY STAGE OF PRODUCTION FOR BOTH PACKAGING AND PACKING, AND FOR LABELING, SHIPPING AND STORAGE. POWERFUL HYDRAULIC PRESSES MAKE SALT BLOCKS UNDER 800 TONS PRESSURE.

MACHINERY AND EQUIPMENT, TOGETHER WITH SKILL AND EXPERIENCE, ARE ALL COMBINED IN THESE OPERATIONS FOR JUST ONE PURPOSE:--TO BRING US EVAPORATED SALT OF THE HIGHEST UNIFORM QUALITY.



If you could visit our big Leslie plants on San Francisco Bay, you would, we believe, be surprised at the resources, the skill and the equipment necessary to make such good salt as Leslie.

This booklet merely gives you a glimpse of how we do it. We wish it were possible to have you as our guest at Newark, California . . . so that you could see for yourself every step in the fascinating process.

We are the largest producers of salt on the Pacific Coast. For 40 years we have made Leslie Salt as good as salt can be made. And for 40 years we have had the helpful cooperation of your retail grocer . . . the man who provides the vital connecting link between our manufacturing skill and resources and you . . . the user of our product.

Without him . . . without his unceasing effort to sell food to you at the lowest price . . . it would be impossible for you to buy the familiar red package of Leslie Salt at such small cost. For this real service to you and to us, we say: "Thank you, Mr. Grocer!"

If you've enjoyed "The Story of Salt" we're glad. And if you wish an additional copy, just drop a line to:

LESLIE SALT CO.

310 SANSOME ST. · SAN FRANCISCO 6

Leslie is changing its dress. So for a short time you may see a slightly different package at your grocer's. Quality is exactly the same. Plain or iodized. Always free-running.